

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number
WO 2004/066655 A1

(51) International Patent Classification⁷: **H04Q 7/36**

(21) International Application Number:
PCT/EP2004/050036

(22) International Filing Date: 22 January 2004 (22.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0301546.8 22 January 2003 (22.01.2003) GB

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(54) Title: **METHOD AND APPARATUS FOR FREQUENCY PLANNING IN A CELLULAR COMMUNICATIONS SYSTEM USING MODIFIED NEIGHBOUR LISTS**

NEIGHBOR POSITION

202

| CALL NUMBER | 202 | | | | | | | | | | | |
|-------------|-----|---|---|---|---|----|----|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 204 | 1 | 1 | 3 | 4 | 7 | 12 | 17 | 2 | 5 | 6 | 8 | 13 |
| | 2 | 1 | 3 | 4 | 7 | 12 | 17 | 15 | 16 | 18 | 19 | 2 |
| | 3 | 1 | 3 | 4 | 7 | 12 | 17 | 6 | 8 | 13 | 14 | 15 |

208

210

212

206

(57) Abstract: A method, and apparatus for, determining frequency planning measurement data in a cellular communications system (1), comprising: allocating neighbour lists (208, 210, 212) to provide measurement data for frequency planning; wherein the neighbour lists (208, 210, 212) are allocated on a per call basis. Thus different neighbour lists (208, 210, 212) may be allocated by the same base station (28) to different mobile stations (44, 46, 48) for respective calls (204) that overlap in time. A different neighbour list (208, 210, 212) may be allocated for substantially each call (204) conducted by a base station (28) of the cellular communication system (1), compared to respective directly preceding calls or may be allocated for substantially each of a predetermined number of calls conducted by a base station (28) of the cellular communications system (1), compared to the predetermined number of directly preceding calls. At least substantially all test frequencies (206) for the cell (16) served by the base station (28) may thereby be covered over a plurality of calls (204).

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